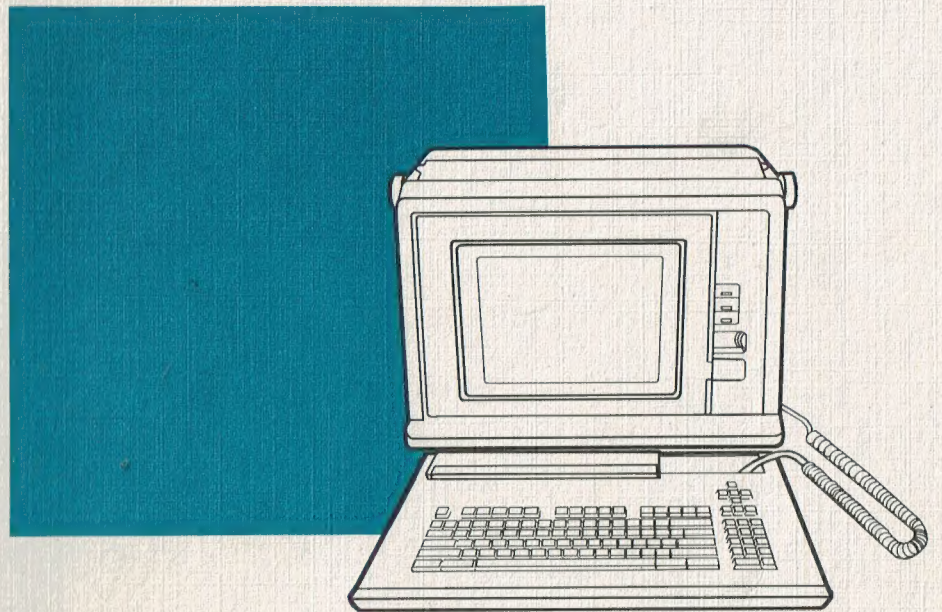


*PowerMate® Portable SX*

---



## **Plasma Display Manager**

---

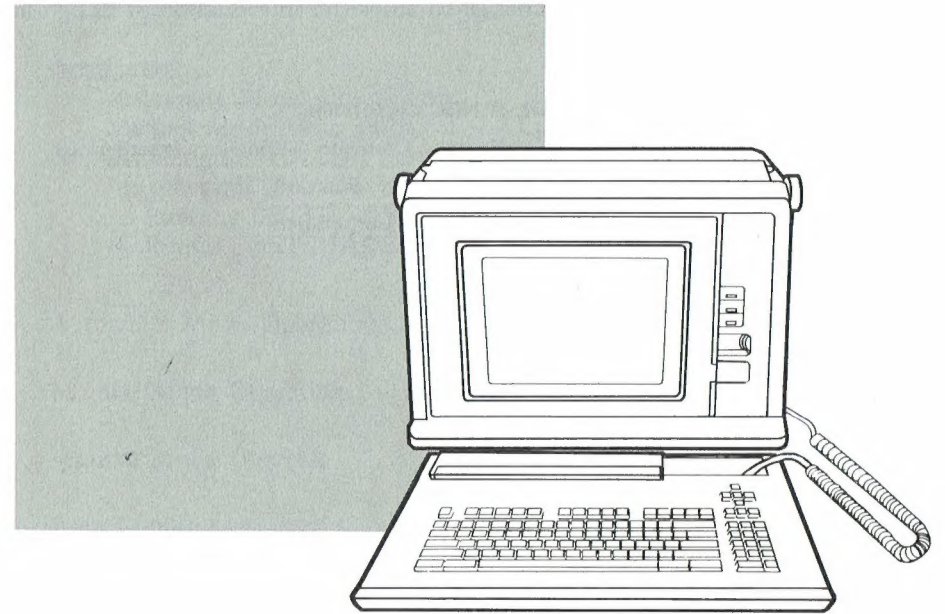
**NEC**  
NEC Information Systems, Inc.

819-180155-000 Rev. 00

11-88

*PowerMate® Portable SX*

---



**Plasma Display  
Manager**

---

**NEC**  
NEC Information Systems, Inc.

## PROPRIETARY NOTICE

The information and design disclosed herein were originated by and are the property of NEC Corporation. NEC reserves all patent, proprietary design, manufacturing, reproduction use, and sales rights thereto, and to any article disclosed therein, except to the extent rights are expressly granted to others. The foregoing does not apply to vendor proprietary parts.

Specifications are subject to change to allow the introduction of design improvements.

PowerMate is a registered trademark of NEC Corporation.

Hercules is a registered trademark of Hercules Computer Technology Incorporated.

Lotus 1-2-3 is a registered trademark of Lotus Development Corporation.

MS-DOS is a registered trademark of Microsoft Corporation.

First Printing – November 1988

Copyright 1988  
NEC Information Systems, Inc.  
1414 Massachusetts Ave.  
Boxborough, MA 01719

Printed in U.S.A.

## Contents

---

	Page
The Plasma Display Manager SETSHADE .....	1
Requirements And Restrictions .....	2
Installation .....	3
Automatic Mode Description .....	3
Manual Mode Description .....	3
Installing SETSHADE Permanently in the System .....	4
Installing SETSHADE on Your Hard Drive .....	5
Running SETSHADE from the DOS Prompt .....	5
Running SETSHADE from a Batch File .....	6
Automatic Mode Operation .....	7
Manual Mode Operation .....	8
Manual Mode Override .....	9
Help Menus .....	10
Error Messages .....	12

## THE PLASMA DISPLAY MANAGER SETSHADE

The Plasma Display Manager diskette comes with your system and contains the utility SETSHADE.COM. This utility enhances the gray-scale graphing capability of the PowerMate® Portable SX gas plasma display. The monochrome display can use up to 16 gray shades to emulate color palettes supplied by application programs. Working with these color palettes, SETSHADE automatically translates the color values into unique gray shade intensities to provide sharp gray-scale graphics.

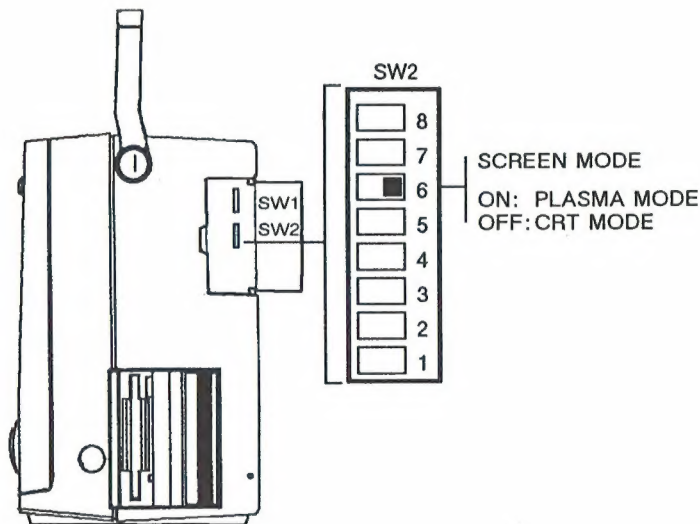
SETSHADE combines the following features.

- Two modes of operation:
  - Automatic Mode (running SETSHADE as a memory-resident utility)
  - Manual Mode (running SETSHADE from the MS-DOS® command prompt or from a batch file).
- Manual Mode override of Automatic Mode for fine-tuning the automatic selections.
- Simple user interface.
- Hot key to invoke the Manual Adjust pop-up window when the utility is permanently installed.
- On-line help menus.
- Command line options.
- Ability to toggle output (color or monochrome) to an external display.
- Ability to re-position the program display horizontally on the screen.
- Support for all standard EGA modes.
- High-memory installation. Uses no system RAM when permanently installed.

# REQUIREMENTS AND RESTRICTIONS

SETSHADE imposes the following requirements and restrictions.

- The utility functions only when the PowerMate Portable SX is configured for Plasma Display Mode operation. To enable the Plasma Display Mode in your system, you must set switch 6 on switch bank SW2 to ON.



Additional switch setting information is found on page 40 of your *PowerMate Portable SX Owner's Guide*.

- When SETSHADE is permanently installed, it loads into the E000:0000 to E000:FFFF range of high memory. If an option ROM is already installed in this range, SETSHADE will not load and an error message is displayed.
- SETSHADE can be used only with DOS version 3.3 or higher.
- SETSHADE does not support the Hercules®, MDA, and CGA emulation modes.
- Applications that directly program the hardware without updating the BIOS data area may produce partial displays, or no display, of the Manual Adjust pop-up window. If this problem occurs, continuously press the **Ctrl-Alt-Tab** hot-key combination followed by **Esc** until the Manual Adjust pop-up window is displayed properly.

# INSTALLATION

SETSHADE can be

- installed permanently in high memory
- installed on your hard drive and run as a DOS utility from either the DOS prompt or a batch file
- run as a DOS utility from drive A.

## Automatic Mode Description

Permanent installation loads SETSHADE into high memory and turns Automatic Mode ON. Automatic Mode operation is recommended if you want SETSHADE to be running in the background every time you start the system. In Automatic Mode, SETSHADE selects a unique gray shade intensity for each palette color displayed on the screen by a particular application.

In most cases, the values selected by Automatic Mode will be the optimal gray shade choices and you will not need to adjust them manually. However, you can override Automatic Mode to fine-tune the automated gray shade settings. This feature is explained in "MANUAL MODE OVERRIDE."

## Manual Mode Description

Installing SETSHADE on your hard drive allows you to run the utility in Manual Mode from either the DOS prompt or a batch file such as AUTOEXEC.BAT.

Manual Mode operation is recommended for the following reasons.

- You can adjust individual gray shades for greater control. If the difference between two gray shades is marginal, you can spread them out manually for sharper contrast.
- Manual Mode ensures full system performance, which decreases slightly with the automatic mapping of palette colors to gray shades.
- You can set the gray shade intensities once for a particular application and then leave them alone.

Installing SETSHADE Permanently in the System

To install SETSHADE permanently in the system, follow these steps.

- 1. Boot from DOS.
- 2. Insert the SETSHADE diskette in drive A.
- 3. Enter the following command at the A> prompt:

```
SETSHADE /P [/C]
```

Note that in the DOS command line, items in brackets — [ ] — are optional.

Options

- /P Installs the utility permanently in your system and sets Automatic Mode ON. You can then display the Manual Adjust pop-up window by pressing **Ctrl-Alt-Tab** simultaneously.
- /C Toggles output to an external display from color to monochrome or monochrome to color. The default at power-on is monochrome.

Installing SETSHADE on Your Hard Drive

Copy SETSHADE to your hard drive as follows.

- 1. Boot from DOS.
- 2. Insert the SETSHADE diskette in drive A.
- 3. Copy SETSHADE.COM onto your hard drive by using the DOS Copy command. For example, the following command copies SETSHADE to the UTIL subdirectory of drive C.

```
Copy A:SETSHADE.COM C:\UTIL
```

For more information on copying files, see the Copy command in your MS-DOS User's Guide.

RUNNING SETSHADE FROM THE DOS PROMPT

You can run SETSHADE from drive A when the SETSHADE diskette is inserted or from drive C when SETSHADE is installed on your hard drive.

To run SETSHADE, enter the following command at the DOS prompt:

```
SETSHADE [s1 s2 s3 s4 s5 s6 s7 s8 s9 s10 s11 s12 s13 s14 s15 s16] [/C] [/?] [/H]
```

Note that in the DOS command line, items in brackets — [ ] — are optional.

Options

- s1...s16 Specifies 16 shades of gray as initial gray shade values for a given application. Note that all 16 values must be entered and specified as hexadecimal digits 0 through F.
- /C Toggles output to an external display from color to monochrome or monochrome to color. The default at power-on is monochrome.
- /? or /H Requests a help message.

## RUNNING SETSHADE FROM A BATCH FILE

You can run SETSHADE from a batch file if you install SETSHADE on your hard drive. Batch files let you execute a sequence of commands by simply entering the name of the batch file. Putting SETSHADE in a batch file is useful if you want to specify the gray shade intensities for a particular application.

The following steps show you how to create a batch file named SET123.BAT that executes SETSHADE, specifies 16 gray shade values, and executes Lotus 1-2-3.®

1. Type the following command, and press **Enter**.

### **COPY CON SET123.BAT**

This command tells DOS to copy the information from the console (keyboard) to the file SET123.BAT.

2. Type the following lines, pressing **Enter** after each line.

```
PATH = C:\UTIL;\123
SETSHADE 0 2 8 A 4 6 C E 1 3 4 B 5 7 D F
LOTUS
```

The Path command tells DOS where to find SETSHADE and Lotus in your directory system. In this example, assume that SETSHADE is in a subdirectory named UTIL and Lotus is in a subdirectory named 123.

The SETSHADE and LOTUS commands tell DOS to run these programs. In the SETSHADE command line, numbers 0 through F represent 16 different gray shade intensities.

3. Press **Ctrl-Z** and press **Enter** to save the batch file.

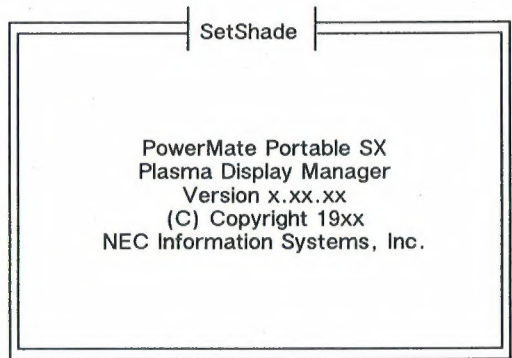
To execute the file, simply enter the filename SET123 at the DOS prompt.

Placing SETSHADE in your AUTOEXEC.BAT file is the easiest way to ensure that the Plasma Display Manager is running when you boot the system.

For further information on creating batch files, see Batch Processing in your MS-DOS User's Guide.

## AUTOMATIC MODE OPERATION

When you install SETSHADE permanently in the system, Automatic Mode is activated and the following message appears on the screen.



Press **Ctrl-Alt-TAB** to activate.

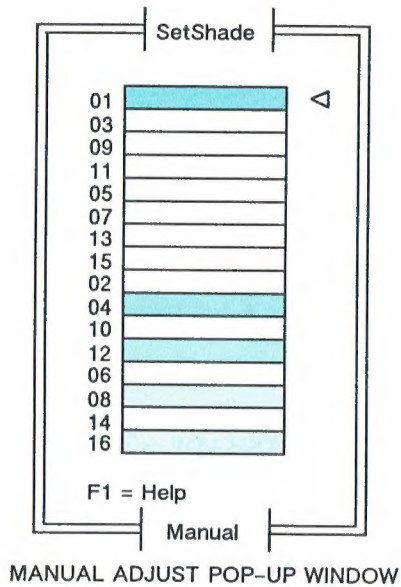
This message tells you that SETSHADE is running in the background. At this point, you can either run a program from the DOS prompt or press the **Ctrl-Alt-Tab** hot key to display the Manual Adjust pop-up window shown on page 8. (You can use the hot key while working in an application program.)

Automatic mode causes system performance to decrease slightly. Occasionally, you may notice a mode change in the application and a change in the relative dark-to-light intensities on the screen. This is normal for Automatic Mode operation. You can disable Automatic Mode at any time to restore full system performance.

The Automatic Mode help menu, shown on page 10, lists all the actions that you can perform in Automatic Mode. To display the help menu, first press **Ctrl-Alt-Tab**. The Manual Adjust pop-up window shown on page 8 appears. Then press **F1**.

# MANUAL MODE OPERATION

When you enter SETSHADE from the DOS prompt or from a batch file, Manual Mode is activated and the Manual Adjust pop-up window appears on the screen.



The sample window shows 16 gray shade values (01-16), with 01 being the darkest shade and 16 being the lightest. (Only a sampling of gray shade intensities is shown in the shade bars.) The cursor or position indicator appears in the upper right corner. The current mode of operation (Auto or Manual) is indicated at the bottom of the window.

The number of gray shade values that appears in the pop-up window can range from 2 to 16, depending on the number of colors supported by the video mode selected. (For information on selecting video modes, see the Mode command in your MS-DOS User's Guide.)

The Manual Mode help menu, shown on page 10, lists all the actions that you can perform in Manual Mode. To display the help menu, press **F1**.

# MANUAL MODE OVERRIDE

Manual Mode override consists of switching from Automatic Mode to Manual Mode in order to fine-tune the gray shade intensities automatically selected by SETSHADE.

To activate Manual Mode from Automatic Mode, first press **Ctrl-Alt-Tab**. The Manual Adjust pop-up window is displayed. Then press **M** to switch from Automatic to Manual Mode. Once you have manually adjusted the gray shade intensities, press **Enter** to save the settings. When you press **Esc** to exit the session, Manual Mode is enabled and full system performance is restored.

To restore the default palette values for your application, take one of the actions below.

- Exit and then re-enter the application. This allows the application to reset the palette values. (The gray shade values are not affected.)
- Issue a display mode change command, such as **MODE CO80**, from the DOS prompt. This allows the BIOS to reset the palette values.

HELP MENUS

Pressing **F1** from the Manual Adjust pop-up window displays one of the help menus shown below, depending on which mode of operation is active.

SetShade	
Action	Key
Select	= ↑ ↓
Adjust	= ← →
Cancel	= ESC
Reset	= HOME
Save	= ENTER
Move	= R
Move	= L
Mono	= C
Auto	= A
Manual	= M
F1	= Return
Auto	

AUTOMATIC MODE HELP MENU

SetShade	
Action	Key
Select	= ↑ ↓
Adjust	= ← →
Cancel	= ESC
Reset	= HOME
Save	= ENTER
Move	= R
Move	= L
Mono	= C
F1	= Return
Manual	

MANUAL MODE HELP MENU

The current mode of operation (Auto or Manual) is indicated at the bottom of the menu.

The help menu action keys are described below.

Key	Action
↑	Moves the cursor up to select a shade intensity bar.
↓	Moves the cursor down to select a shade intensity bar.
→	Lightens or brightens the gray shade.
←	Darkens or dims the gray shade.
ESC	Cancels the SETSHADE session and returns you to DOS.
HOME	Returns the gray shade settings to previous levels.
ENTER	Saves the gray shade settings.
R	Moves the program display to the right.
L	Moves the program display to the left.
C	Toggles output (color or monochrome) to an external display.
F1	Returns you to the Manual Adjust pop-up window.
A	Activates Automatic Mode.
M	Activates Manual Mode.

You must press **F1** to exit Help Mode before you can use the action keys.

## ERROR MESSAGES

This section explains the messages that may appear when you run SETSHADE.

**SetShade has been previously installed.**

This message appears when you try to execute SETSHADE from DOS after the utility has been permanently installed in the system.

**New Values loaded.**

This message appears when you change the gray shade intensities by running SETSHADE from a batch file.

**ERROR: Invalid command line!**

Invalid characters appear in the SETSHADE command line. Refer to the INSTALLATION section and re-enter the SETSHADE command.

**Usage: SetShade [/P][s1 s2 s3 s4 s5 s6 s7 s8 s9 s10 s11 s12 s13 s14 s15 s16]..Where..For example...**

The command line syntax or format has been violated. Refer to the INSTALLATION section and re-enter the SETSHADE command. Note that the shade values entered from the command line must be the hexadecimal digits 0 through F.

**SetShade is only to be used with the NEC PowerMate Portable SX with the Plasma-Screen enabled. Aborting!**

Before installing SETSHADE, enable the plasma display mode by setting SW2-6 to ON, as explained on page 40 in your owner's guide.

**Incorrect DOS version for the permanent installation of SetShade! Aborting!**

DOS version 3.3 or higher is required to install SETSHADE permanently.

**SetShade requires the NEC PowerMate Portable SX with the Plasma-Screen. Aborting!**

This message appears if you try to run SETSHADE on any system other than the PowerMate Portable SX.

**SetShade does not support the current Video Mode.**

SETSHADE is designed to execute in any of the standard EGA modes. It does not support the Hercules, MDA, or CGB emulation modes.

**SetShade cannot be used with an option ROM installed at E0000h! If you desire to use SetShade, consult your option board manual to determine how to leave the E0000-EFFFFh memory area free.**

This message appears if you cannot install SETSHADE permanently in the system.

**USER'S COMMENTS FORM****Document:** PowerMate® Portable SX Plasma Display Manager**Document No.:** 819-180155-000 Rev. 00

Please suggest improvements to this manual.

---

---

---

---

---

---

---

---

Please list any errors in this manual. Specify by page.

---

---

---

---

---

---

---

---

From:

Name \_\_\_\_\_ Title \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

Date: \_\_\_\_\_ Business Phone No.: \_\_\_\_\_

Seal or tape all edges for mailing - do not use staples

FOLD HERE



NO POSTAGE  
NECESSARY  
IF MAILED  
IN THE  
UNITED STATES

**BUSINESS REPLY CARD**  
FIRST CLASS PERMIT NO. 105 ACTON, MA

POSTAGE WILL BE PAID BY ADDRESSEE

**NEC Information Systems, Inc.**

Dept: Publications

1414 Mass. Ave.

Boxborough, MA 01719-9984



FOLD HERE

Seal or tape all edges for mailing - do not use staples